CHAPTER 9. CONDUCT RAMP INSPECTION ON CARGO LOADING

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3623

B. ATOS Element: 3.1.8

3. OBJECTIVE. This chapter provides guidance for conducting surveillance and inspection on Title 14 of the Code of Federal Regulations (14 CFR) part 121 and 135 passenger, cargo, combi, and regional passenger aircraft that transport cargo, passenger baggage, company materials (COMAT), and hazardous materials (HAZMAT) in the upper deck, lower deck, forward and/or aft cargo compartments, or pods.

5. GENERAL.

A. Federal Aviation Administration (FAA) Inspection Personnel.

(1) Aviation safety inspectors (ASI) should become familiar with the type of aircraft to be inspected before performing their surveillance. This may be accomplished through on the job training (OJT) or formal aircraft systems training.

(2) Due to operators' varying schedules, inspectors may need to perform their surveillance outside of normal office hours or when time permits.

(3) Inspectors should complete the cargo computer-based instruction (CBI) course #27013.

(4) Inspectors will review the operator's cargo procedures.

B. Coordination.

(1) An ASI who needs additional information or guidance on a topic will coordinate with other ASIs who are experienced in that specialty.

(2) Geographic units may need to coordinate with the certificate-holding district office (CHDO) to gain access to the operator's maintenance procedures manual. In addition, when it finds discrepancies, the geographic unit will communicate with the CHDO before initiating corrective or enforcement action.

7. INITIATION AND PLANNING.

A. Initiation. This task is scheduled as part of the work program. Additional inspections are initiated by national, regional, or district office special requirements.

B. Planning. The ramp inspection provides the ASI with a good opportunity to ensure that the compliance dates and requirements of new Airworthiness Directives (AD) and regulatory revisions have been met. ASIs should review ADs, Service Difficulty Report summaries, maintenance/ airworthiness bulletins, PTRS entries, and incidents, when available, to become familiar with current service difficulty information.

(1) Review Vital Information Subsystem (VIS) for special authorizations.

(2) Review operator's cargo and baggage loading procedures.

(3) Review operator's weight and balance procedures.

(4) Review operator's procedures for unusual loads such as oversized cargo, sports teams and their equipment, or military contract loads (either cargo or troop transport).

(5) Review operator's procedures for loading last-minute items in cargo, baggage, pod compartments, and so forth. May include items such as carry-on bags, last-minute bags or cargo, mail, or COMAT/HAZMAT.

(6) Principal inspectors are responsible for operator AD compliance procedures and may request assistance from geographic ASIs for surveillance of AD accomplishment.

9. MAINTENANCE RECORDS.

A. By regulation, maintenance, when performed, must be recorded in the aircraft records prior to an approval for return to service. The operator's manual should describe the procedures for ensuring that recording requirements are met for cargo-related

equipment. Additionally, the manual should include the specific instructions on when an airworthiness release or appropriate maintenance log entry is required.

NOTE: The records should include unit load devices (ULD), net, or cargo handling system component repairs conducted in-house or by outside agencies, and record retention and receiving inspections of those items.

B. Every mechanical discrepancy in the maintenance log must be either corrected or deferred using the methods identified in the operator's maintenance procedures manual.

11. DEFERRED MAINTENANCE.

A. Minimum Equipment List (MEL)—Deferred Maintenance. The operator's approved MEL allows the operator to continue a flight or series of flights with certain inoperative equipment. The continued operation must meet the requirements of the MEL deferral classification and the requirements for the equipment loss. Only items that appear in the Master Minimum Equipment List (MMEL) are approved by the Flight Standards Operations Board (FOEB). During the ramp inspection, an ASI may encounter MEL items that do not appear in the MMEL but have been approved by the CHDO for individual carrier use. If this is the case, the ASI should contact the CHDO for clarification, if required.

B. Other Deferred Maintenance.

(1) Operators frequently use a system to monitor items that have been inspected previously and found to be within serviceable limits, per the maintenance manual. These items are still airworthy, yet warrant repair at a later time or when the items no longer meet serviceable limits. This method of deferral may require repetitive inspections to ensure continuing airworthiness of the items. Examples of items that are commonly deferred in this manner are fuel leaks, surface dents, and temporary (airworthy) repairs.

(2) Passenger convenience item (not safety/airworthiness related) deferrals should be handled in accordance with the operator's program.

C. Repairing Inoperative Items. The maintenance program approved for an operator must provide for prompt and orderly repairs of inoperative items.

13. AIRCRAFT INSPECTION GUIDELINES. Ensure the following:

A. Load Manifest. Ensure that the load manifest form is prepared and signed by employees of the certificate holder or other qualified and authorized persons assigned to supervise the loading of aircraft and prepare the load manifest form.

B. Upper Deck Inspection (Cargo/Combi Aircraft).

(1) Inspect the main cargo door, door seal, locking mechanism, and door lock viewing windows (if installed) for damage, deterioration, distortion, and security.

(2) Inspect the cargo compartment, paying particular attention to the condition and security of the ceiling, sidewall linings, and floor panels. Holes in liners that are repaired by tape may indicate hidden damage.

(3) Inspect main floor locks, rollers, side rails, and cargo loading components for security, damage, and general condition. Ensure conformance with the air carrier's approved program.

NOTE: Be aware of possible substitution of load-bearing components of the cargo handling system. If any substitution of load-bearing components is found, contact the air carrier for clarification. After the inspection is completed, the ASI should contact the CHDO.

(4) Inspect the main cargo doorsill protector for installation and security.

(5) Inspect the main cargo compartment area for foreign object damage and general cleanliness.

(6) Inspect the overall condition of the smoke barrier curtain, if installed, or cockpit door seal, barrier net assembly, or solid bulkhead. Ensure that the net (if used) is properly rated for its intended G loading. Pay particular attention to the following:

(a) The smoke barrier curtain must be free of tears, holes, and cuts to prevent smoke from entering the forward cabin and flight deck.

(b) The door seal, for condition and integrity.

(c) The barrier net, for condition and security (i.e., check for frayed straps, hardware integrity, and proper markings).

(d) Cargo compartment retention nets, for condition and security.

(e) The solid bulkhead, for condition and security.

(f) The required placards, such as loading, fire suppression, and so forth.

C. Lower, Forward and/or Aft Compartment (Passenger and Cargo Aircraft), and Pods.

(1) Inspect the compartment or pod to determine its condition, security, deterioration, and cleanliness.

(2) Ensure that the required placards are installed.

(3) Ensure that baggage is loaded in accordance with the operator's weight and balance program and/or other operator procedures.

(4) Check the condition and security of tiedown devices/restraints.

(5) Check the security of ballast, if installed.

(6) If the aircraft is equipped with cargo pods, inspect area like any other cargo compartment.

(7) Inspect cargo for proper tagging and/or identification (e.g., mail, crew bags, equipment, and parts that the carrier considers COMAT). Inspect floor locks/cargo loading system, if installed. Inspect door seals and mechanisms.

(8) Inspect the interior, paying particular attention to the condition and security of the ceiling/ sidewall linings and floor panels, including the proper installation of repair tape.

(9) Inspect cargo doors, door seals, locking mechanisms, and door lock viewing windows (if installed) for cleanliness, damage, deterioration, and security. Ensure that the fire detection/suppression is appropriate for its classification and that required placards are present.

(10) Ensure that cargo is properly secured by appropriate tie-downs having enough strength to eliminate the possibility of shifting under all normal flight conditions.

(11) Inspect retention nets for condition and security.

(12) Ensure that loading/unloading is conducted in a safe manner in accordance with the operator's procedures.

D. Unit Load Devices (ULD).

(1) Ensure that ULDs are eligible for installation on the aircraft.

NOTE: Eligibility is determined by the original equipment manufacturer (OEM) Weight and Balance Manual or supplemental type certificate (STC) Weight and Balance Supplement.

(2) Ensure that TSO markings are attached to cargo containers, nets, and pallets (if applicable).

(3) Inspect ULD (nets, pallets, and containers) for serviceability per the air carrier's procedures and limitations.

(4) Ensure that identification markings are present in accordance with operator procedures.

E. Weighing Scales.

(1) Inspect current calibration of scales traceable to the National Institute of Standards and Technology, or equivalent.

(2) Inspect overall condition of scales.

(3) Ensure conformance with the air carrier's program.

(4) Observe weighing procedures and system integration to the load manifest.

F. Aircraft Loading and Ground Equipment.

(1) Ensure that the aircraft is loaded/unloaded in accordance with the operator's manual.

(2) Ensure that ground equipment is positioned in accordance with the operator's manual.

(3) Ensure that load sheets or the manifest is properly executed and signed for.

(4) Ensure that HAZMAT information is relayed to the crew.

(5) Observe general safety procedures being used during cargo off-loading operations, especially at night, for use of lighting, reflective clothing, flashlights, and wands.

G. Supernumeraries.

(1) Inspect the supernumerary area (if equipped) for condition and security.

(2) Ensure that emergency equipment is properly installed and each item has an inspection tag affix.

(3) Ensure that escape devices, such as slides, ropes, or descent devices, are serviceable per the operator's manual.

(4) Ensure proper placarding of the supernumerary area for emergency exit.

(5) Ensure that supernumerary to flight deck communications is serviceable.

(6) Inspect the galley area (if installed) for condition and security.

H. Dangerous Goods. The surveillance of hazardous material handling is not the primary function of the Flight Standards Service (AFS). However, inspectors can ensure the following:

NOTE: Corrosion and structural damage may occur by improper handling of some hazardous materials.

(1) Inquire about proper training for loaders, load supervisors, and personnel involved in ULD build up in HAZMAT recognition.

(2) Inquire about proper training in HAZMAT recognition for maintenance personnel involved with movement of COMAT.

(3) Ensure proper loading and marking of HAZMAT materials. The ASI should contact the CHDO and, if time permits, the appropriate representative from the FAA Office of Security and Investigation (ACS) after noting discrepancies in the handling of HAZMATS.

(4) Inquire about safety procedures and equipment availability in case of a HAZMAT accident, such as a spill (e.g., mercury spill kit, emergency equipment).

I. Civil Reserve Air Fleet (CRAF) (If Aircraft is Being Operated in CRAF Operations).

(1) If the operation involves the CRAF program with the Air Force Air Mobility Command (AMC), the ASI should ensure the following:

(a) Operator CRAF procedures are followed.

(b) Aircraft are equipped for CRAF operations.

(c) Check that loadmaster or equivalent procedures are followed.

(d) Weight and balance procedures for CRAF operations are followed.

(2) If the operator contracts with AMC outside of the CRAF arena, ensure that the operation conforms to the operator's current procedures.

(3) Ensure that authorized military ULDs are used.

NOTE: Authorized military ULDs may be found in the appropriate OEM weight and balance manual or STC weight and balance supplement.

15. INSPECTION RESULTS.

A. This inspection must be accomplished without interfering with the ground time limitations unless safety of flight becomes an issue. The following items, which are common discrepancies, may cause scheduling delays if found during a ramp inspection.

- Improper load manifest
- ULDs are not airworthy
- Damage to aircraft loading system
- Damage to the aircraft
- Improper positioning of ground equipment
- Inadequate training
- Any other unusual operator activity

B. The ASI must bring all noted discrepancies to the attention of appropriate personnel immediately, to allow the operator the opportunity to take corrective action without interrupting the flight schedule. The ASI must verify that all corrective maintenance actions taken regarding maintenance discrepancies were in accordance with the requirements of the operator's maintenance procedures manual.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR parts 121 and 135, as applicable
- Successful completion of the General/Air Carrier Airworthiness Safety Inspectors Indoctrination course and CBI course # 27013
- Experience working with similar type aircraft

B. Coordination:

- This task may require coordination between Airworthiness and Operations ASIs
- Geographic units should coordinate with the CHDO

3. REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 21, 23, 25, 27, 29, 43, 45, 47, 91, 121, and 135
- Advisory Circular (AC) 25-17, Transport Airplane Cabin Interiors Crashworthiness Handbook
- AC 25-18, Transport Category Airplanes Modified for Cargo Service
- AC 120-27, Aircraft Weight and Balance Control
- FAA Order 8300.10, Airworthiness Inspector's Handbook
- Operator's Maintenance Procedures Manual

B. Forms. None.

C. Job Aids. ATOS Element 3.1.8.

5. PROCEDURES.

A. Initiate Ramp Inspection in Accordance with the Flight Standards Field Office Work Program.

B. Prepare for the Inspection.

(1) Review the operator's flight schedule, select the flight to be inspected, and note the type of operation (cargo or PAX). Make certain the selected flight has adequate ground time so that the inspection can be accomplished without schedule delays.

(2) Determine if any recent problem areas have been identified for that type of aircraft.

(3) Determine if recent regulatory changes and AD requirements affect the aircraft to be inspected.

C. Conduct Exterior Inspection, as Applicable. Perform this inspection in accordance with FAA Order 8300.10, vol. 3, ch. 1, Introduction to Aircraft and Equipment, Figure 1-2, Exterior Inspection Guidelines, paying particular attention to areas identified in Section 1 of this chapter.

D. Interview Flightcrew and/or Loading Supervisor, as Appropriate. Introduce yourself to the flightcrew and/or loading supervisor, as appropriate, and describe the purpose and scope of the inspection.

E. Inspect Aircraft Maintenance Records.

(1) Ensure that all open discrepancies from the previous flight are addressed per the operator's manual, prior to departure of the aircraft.

(2) Review the maintenance records to determine if repetitive maintenance problems exist, which might indicate a trend.

(3) Ensure that all MEL items are deferred in accordance with the provisions of the operator's approved MEL.

(a) Review the operator's approved MEL to determine whether conditions, procedures, and placarding requirements were accomplished to correctly defer specific items.

(b) Note the date when an item was first deferred to determine if the maximum allowed length of deferral was exceeded. Accomplish this by examining maintenance record pages, the deferred maintenance list, or deferred maintenance placards or stickers.

(4) Ensure that an airworthiness release, maintenance record entry, or appropriate approval for return to service has been made after the completion of maintenance.

(5) Ensure that the maintenance record contains the following for each discrepancy, as specified in the operator's manual:

- Description of the work performed or a reference to acceptable data

- Name or other positive identification of the person approving the work
- Name of the person performing work, if outside the organization

F. Perform Interior Inspection, as Applicable. Perform this inspection in accordance with Volume 3, Chapter 1, Figure 1-1, Interior Inspection Guidelines, paying particular attention to areas identified in Section 1 of this chapter.

G. Debrief Operator. Inform the appropriate personnel that the inspection has been completed. Discuss the discrepancies found during the inspection with the operator.

H. Examine Maintenance Record Entries. Ensure that the operator has recorded all maintenance discrepancies noted during this inspection. If time is available, monitor the operator's corrective actions.

I. Analyze Findings. Analyze each finding to determine if the maintenance-related discrepancies are the result of improper maintenance and/or missing or inadequate maintenance/inspection procedures.

7. TASK OUTCOMES.

A. File PTRS Data Sheet.

B. Complete the Task. Completion of this task can result in the following:

(1) Appropriate enforcement action when analysis of the findings disclose improper maintenance.

(2) Written notification to the operator of the necessary changes to the manual, when analysis of the findings disclose missing or inadequate maintenance/ inspection procedures.

(3) Communication with the CHDO by the geographic unit finding discrepancies.

C. Document Task. File all supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Based on inspection findings, determine if increased surveillance, additional enforcement, other job tasks, and/or additional coordination between the CHDO and geographic units is required for noncompliant operators to regain compliance.